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Assembly and Commissioning of a Liquid Argon Detector and Development of a Slow Control System for the COHERENT Experiment MICHAEL KAEMINGK, ROBERT COOPER, New Mexico State University, COHERENT COLLABORATION — COHERENT is a collaboration whose goal is to measure coherent elastic neutrino-nucleus scattering (CEvNS). COHERENT plans to deploy a suite of detectors to measure the expected number-of-neutrons squared dependence of CEvNS at the Spallation Neutron Source at Oak Ridge National Laboratory. One of these detectors is a liquid argon detector which can measure these low energy nuclear recoil interactions. Ensuring optimal functionality requires the development of a slow control system to monitor and control various aspects, such as the temperature and pressure, of these detectors. Electronics manufactured by Beckhoff, Digilent, and Arduino among others are being used to create these slow control systems. This poster will generally discuss the assembly and commissioning of this CENNS-10 liquid argon detector at Indiana University and will feature work on the slow control systems.

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